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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,042	01/22/2002	Steven R. Kunkel	ROC920010209US1	1375

7590 07/02/2003

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EXAMINER

NAMAZI, MEHDI

ART UNIT

PAPER NUMBER

2188

DATE MAILED: 07/02/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/054,042	<b>Applicant(s)</b> KUNKEL ET AL.	
	<b>Examiner</b> Mehdi Namazi	<b>Art Unit</b> 2188	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2002.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 12-17 and 19-24 is/are rejected.
- 7) ☒ Claim(s) 7-11, 18 and 25-28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

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### **DETAILED ACTION**

1. This office action is in response to the application filed January 22, 2002.

#### ***In the Abstract:***

2. The abstract of the disclosure is objected to because it does not enable one to quickly determine from a cursory inspection the nature and gist of the technical disclosure as required by 37 CFR 1.72(b). It appears one or two sentences should be added describing additionally claimed and disclosed features (claims 2-11, e.g.).

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6, 12-17, and 19-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Bryg et al. (Bryg) (U.S. Patent No. 5,586,297).

As per claims 1, 12, and 19, Bryg teaches a method of managing cache in a shared memory multiple processor computer

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system, comprising(fig. 1), each coherent subline write will also perform a purge of the cache line in the processor caches.

("executing, by a processor, a cache purge instruction that configures the processor to purge a cache line from the processor"; col. 4, lines 8-10), and the second and later purges of the same cache line are usually redundant, but are needed for the case where the processor refetches the line into its cache after the first coherent sub-line write ("send the cache line to at least one of a plurality of processors in the shared memory multiple processor computer system to update the at least one of a plurality of processors"; col. 4, lines 10-13).

As per claims 2, 13, and 20, Bryg teaches a coherent read is performed to obtain the current copy of the cache line from the memory, or from a cache which contains the memory location. The cache line is modified to include the block of data. The , the modified cache line is written back to the memory("executing, by a processor, a cache purge instruction is performed after modifying the cache line by the processor"; col. 4, lines 31-35).

As per claims 3, 14, and 21, Bryg teaches each processor cache checks whether the specified address is in its cache(each address could be on plurality of cache lines)("cache line has a unique address"; col. 2, lines 30-31).

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As per claims 4, 15, and 22, Bryg teaches processors 10 and 11, will check cache 17 and 18, using the coherence index field 52 and 53 to determine whether cache 17 and 18 contains an entry for address specified in memory address field 53, if so, processors 10 and 11 will purge the entire cache line("the cache purge instruction updates all processors in the computer system"; cols. 6-7, lines 62-3).

As per claims 5-6, 16-17, 23-24 Bryg teaches updating cache which it could be a cache line or plurality of cache lines which was thought in previous paragraph("the cache purge instruction updates only an oldest cache line, or at least one level of cache"; cols. 6-7, lines 62-3).

***Allowable Subject Matter***

5. Claims 7-11, 18, 25-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mehdi Namazi whose telephone number is (703) 306-2758. The examiner can normally be reached on Monday-Friday from 8:00 AM to 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Pedmanabhan, can be reached on (703) 306-2903.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

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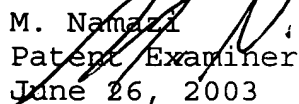
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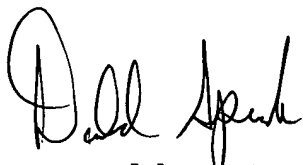
(703) 308-9051-2, (for formal communications intended for entry)

**Or:**

(703) 305-6606 (for informal or draft communications, please label PROPOSED or DRAFT )

Hand-delivered responses should be brought to Crystal Park 2,  
2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).

  
M. Namazi  
Patent Examiner  
June 26, 2003

  
Donald A. Sparks  
Supervisory Patent Examiner  
TC 2100